June 2016 "Your Electric Connection Since 1938"

FEC® POWER Source

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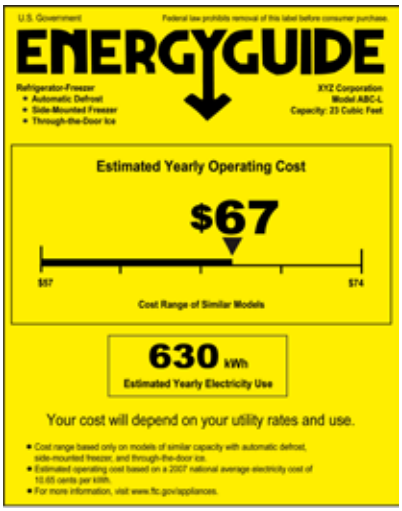
A Touchstone Energy® Cooperative

Look For The Energy Label

Over $1200 of the average annual American household budget goes toward operating appliances, and heating and cooling equipment. Those energy bills, though, can be reduced by using high-efficiency appliances and space conditioning equipment.

When you shop for a major appliance, look for the yellow EnergyGuide labels. There are three types of labels: Energy Cost, Energy Efficiency Rating, and Generic.



Energy Cost: These labels provide you with the estimated annual cost of the energy needed to operate the appliance. The bar beneath the annual cost shows the range of operating costs of competing brands and models of similar size and features. At the bottom of the label is a chart that allows you to estimate what your cost to operate that appliance will be, based on your local utility rate.

Energy Efficiency Rating: These labels indicate the energy efficiency of climate control appliances such as room air conditioners. The large number in the center of the label indicates the efficiency. The larger the number, the more efficient the appliance. This label also provides a range of ratings for similar conditioners and a cost/use chart that allows you to calculate the energy cost of the appliance based on local utility rates.

Generic: This label appears on furnaces and contains general information on how to save energy. It also directs you to an energy fact sheet developed by the manufacturers. This sheet contains information on the seasonal efficiency of a particular model and the efficiencies of the highest and lowest efficiency model with similar capabilities.

So remember, the price of the appliance is not the only consideration to be taken, in the long run, the operating cost may prove more important.

Pole Top Rescue

As a lineman, you hope you never need to use it. As a victim, you pray someone knows how to use it. Pole top rescue is just as the phrase implies. It is a routine that linemen learn and practice because, if there is ever an accident involving a fellow lineman, he/she can be brought down safely.

During their training, the lineman first climbs the pole and then puts his safety belt around the pole so he will be able to work, "hands free." A rope is looped over the cross arm and then tied around the chest of the injured lineman. A life-sized mannequin, weighing approximately 175 lbs., is used during this exercise in training). This may sound fairly easy so far, however, consider this – the rescuer has to think about where his hooks are in the pole, where to throw the rope over the cross arm so it doesn't get crossed or snagged, how he is going to tie the knot around the victim so that it will stay tight, and finally, how he will lower his buddy down in less than three minutes in order to start CPR – it gets very difficult and very stressful.

Our linemen practice pole top rescue procedures until they become routine. If a situation in the field ever arises, the rescue would almost be second nature. FEC linemen attend monthly safety meetings to sharpen their skills and learn safe working practices and procedures. As for pole top rescue, this is one skill they hope they never have to use.

Manager's Message...

Lance Adkins, GM

When was the last time you voted?

At a recent meeting, I learned that fewer and fewer Americans are participating in the election process. In fact, in the last national election the decline in rural voters was more than double the national average, with an 18 percent decline in participation for rural counties. When voters miss the chance to vote, they also lose the opportunity to communicate their concern to our leaders about the issues that matter to us, where we work, live, and raise families.

While New Mexico is considered a rural state, we have seen a gradual shift in population from rural areas to the larger cities. We have also lost representation in the state legislature as rural seats have been reassigned to urban areas. While the majority of local, state, and national elected officials may have the best of intentions, it is difficult for a representative living in the city to relate to issues of concern to those who live outside the city limits.

Over the past several weeks, millions of Americans have trekked to local school gymnasiums, churches, and community centers to cast votes in Presidential, Congressional, and local races. As I write, our next opportunity is just around the corner on June 7. The enthusiasm with which citizens are participating in this election season is encouraging.

When standing together on issues we care about, rural voters can make a difference. Participation in the electoral process is key. Nationwide, over 42 million electric cooperative members, a diverse and vast group of Americans that reach into almost every district and every state in this country, have an opportunity to speak with a united voice and vote. Combined, electric cooperatives provide electric service to more than 75 percent of our nation's landmass. Electric cooperatives are committed to delivering reliable and affordable electricity so consumers can power their homes, businesses, and schools without breaking the bank. Part of this commitment includes using innovative and diverse sources of power that includes renewable energy resources. Ask your candidates about their commitment to an all-of-the-above energy strategy.

Here's what you can do to help. Visit the Co-ops Vote web site, WWW.VOTE.COOP, and take the pledge to BECOME A CO-OP VOTER to support your community and electric cooperative when casting your vote in 2016. The web site will give you information on your elected officials and candidates, the voter registration process, election dates and locations, and background about eight key co-op issues we want our elected leaders to understand: rural broadband access, hiring and honoring veterans, low-income energy assistance, cybersecurity, water regulation, rural health care access, affordable and reliable

See **VOTE** *on* **PAGE 3**

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Questions or article ideas should be directed to :
Thom J. Moore,
POWER SOURCE
Editor, P. O. Box 550
Clovis, New Mexico
88102-0550
Phone 762-4466 or
1-800-445-8541
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VOTE *from* **PAGE 2**

energy, and renewable energy.

Co-ops Vote is a non-partisan program developed by the National Rural Electric Cooperative Association (NRECA), the national service organization that represents the nation's more than 900 private, not-for-profit, consumer-owned electric cooperatives. With 42 million members across the nation, electric co-ops are a powerful voice on national issues that have a local impact.

If you have any questions, please visit WWW.VOTE.COOP. I hope to see you at the polls!

Ask The Energy Guys! Re: Solar PV

Q. Energy Guys, can you tell us a bit about Solar PV systems?
A. Sure! Great Question!

If a person had a Rip Van Winkle moment and fell asleep under a tree a decade ago, they would be amazed at how far solar photovoltaic (PV) systems have come. And they'd be right to feel that way as the technology continues to evolve at a rapid pace. Once the most expensive form of electricity generation, economies of scale in manufacturing, advances in technology, and income tax credits are steadily driving prices down.

The typical PV system has two main components, the panels and the inverter. Disconnect switches are also necessary so the system can be safely isolated for maintenance and other reasons.

Let's take a look at the solar panels first. Each panel is composed of many smaller cells that are all connected and together produce a certain amount of direct current (DC) electricity. When the system is being designed, the number of panels used is determined by the amount of electricity required and

See **SOLAR** *on* **PAGE 4**

Summer Sizzler!

Charbroil Patio Bistro Electric Grill

$149

Save $40!

***While supplies last**

Climb Safely, Avoid Power Lines when Using Ladders

Add your ladder to the list of outdoor equipment that can cause a serious electrical injury. Sixty-five people die every year from electrocutions involving a metal ladder that touched an electrical wire in or around the house. In most cases, someone moves a meal ladder without lowering it to the round and accidentally makes contact with an overhead electrical wire.

Accidents also happen when people use metal ladders while handling an improperly grounded power tool.

Underwriters Laboratories and other rating agencies warn consumers not to bring their ladders within 10 feet of an overhead power line. They also recommend using fiberglass or wood ladders when working anywhere near electric wires or equipment. But any material can allow electricity to pass through it if it is wet.

The experts at UL also recommend that you:

- Buy ladders with a seal from UL or another accredited rating agency.
- Choose a ladder that is long enough for your job. Using a ladder that is too short is the culprit in many accidents.
- Follow the manufacturer's instructions for using your ladder. They set limits on weight and height.
- Inspect your ladder each time you use it for cracks in the wood or crimps in the metal.
- Secure the ladder on a firm, level surface – not on rocks or boards.
- Don't carry equipment while you're climbing a ladder. Buy a tool belt or ask someone to hand you what you need.
- Distribute your weight evenly, and don't overextend your reach.
- Never stand on the top rung of a stepladder or on the bucket shelf.
- Most importantly, make sure when working near power lines, you stay as far away as possible (10 feet a bare minimum). Also, never carry an extension ladder in the extended position from one place to another. Finally, always remember to "look up for safety."

SOLAR *from* **PAGE 3**

the amount of space available to mount them. The collection of panels is called an array.

Since solar cells generate DC power, but our homes and businesses use alternating current (AC) power––the next major system component is the inverter. This piece of equipment converts the DC electricity into AC power, which flows into your home. Like the panels, the inverters are evolving and becoming more capable with many now bearing the "smart" label indicating they can play an active role in the smart grid.

Many consumers are surprised to learn that heat has no part in the production of the electricity. In fact, solar panels increase in efficiency as temperatures drop. This often strikes people as odd since many solar arrays are shown in desserts and other hot, arid locations. A solar array will produce at its best on a cold, clear winter day all things being equal.

Scientists are constantly working with the solar cell components to develop more efficient and powerful combinations. Today, the best commercially available panels have an average efficiency around 17 percent with some high efficiency panels exceeding 21 percent.

PV systems are installed in what is called a grid-tied configuration. This means that the system will only operate when electricity is present on Farmers' Electric's power lines. When a power outage occurs, the inverter automatically shuts down the flow of electricity from the solar array. Without this protective feature, the PV system could potentially back feed electricity into the co-op's lines, becoming a life-threatening danger to line crews and anyone in the area. When the inverter shuts down, the solar power stops flowing, so members should not install a system with the expectation that it will power their home or business during an outage.

While systems are sized to come close to the expected electrical needs of the member, there is no way to continuously match the output of the array to the current need for electricity. At times, the amount of solar power will be more than needed. At other times, it will be less. Here is where net metering comes into play.

The co-op's meter measures both the amount of electricity they supply when the solar production is less than required and the amount of electricity sent into the co-op's lines when solar output exceeds what is needed. Storage is the final piece of the renewable energy puzzle. In the past, a battery system could cost as much as the total PV system. Today, companies like Tesla are bringing battery systems to the market that allow PV system owners to extend the capability and value of their investment at a price that doesn't break the bank. Being able to store excess power with a battery system provides the owner with power during an outage or at night when the PV system is not producing.

Solar has come a long way since first used on satellites in 1958. With this short overview, you now have a basic understanding of how these systmes work.

Right now the best bang-for-the-buck is solar on a utility scale, economy of scale, if you will. Economically, this makes the most sence. However, if you have always wanted to have a small system of your own and truely have a passion for renewable energy, there's never been a better time to do it. Will you get rich? Far from it; even with the attraction of tax credits, it is still a very expensive endeavour and will take some time to recuperate your investment. At the end of the day, you might have peace of mind and the ability to say, "I did my part."

Jason Lindsey and Thom Moore

"Owned By Those We Serve"

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